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(71) **Applicant** *(for all designated States except US)*: **FISHER & PAYKEL APPLIANCES LIMITED** [NZ/NZ]; 78 Springs Road, East Tamaki, Auckland (NZ).

(72) **Inventor; and**
(75) **Inventor/Applicant** *(for US only)*: **HARWOOD, Jonathan, David** [NZ/NZ]; 27 Rathmar Drive, Alfriston, Auckland (NZ).

(74) **Agents: ADAMS, Matthew, D** et al.; A J Park, 6th Floor Huddart Parker Building, PO Box 949, Wellington, 6015 (NZ).

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(54) **Title: SINGLE WINDING BACK EMF SENSING BRUSHLESS DC MOTOR**
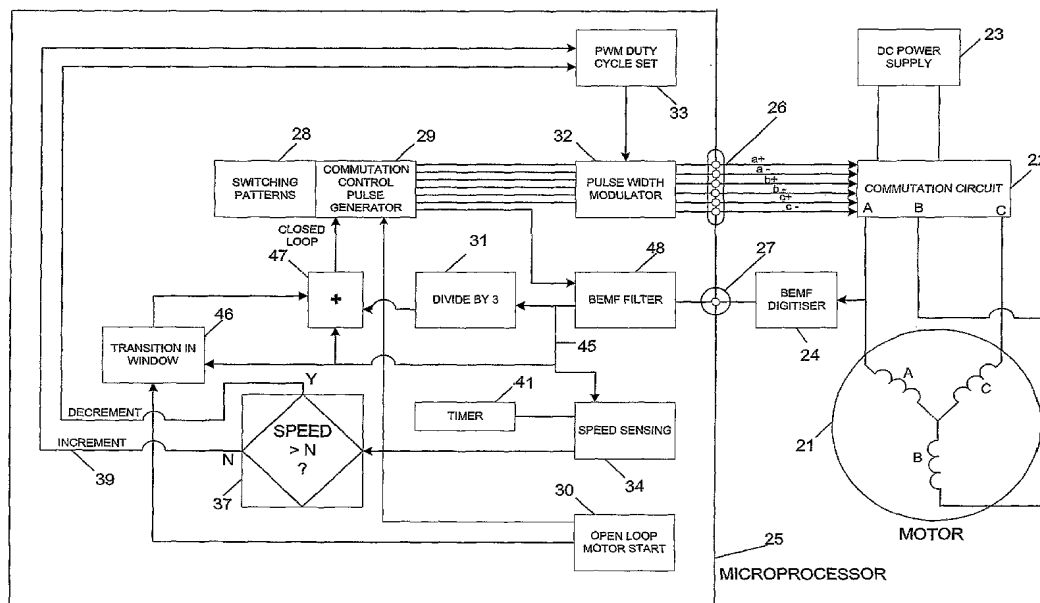
(57) **Abstract:** A method and controller for electronically commutating a permanent magnet brushless dc motor (21) under closed loop control where current is commutated (22) through successive combinations of two out of three stator windings to produce a rotating flux. Commutations are determined by each 60° angular position of the rotor by sensing the back EMF (24) induced in only one of the three stator windings whenever that winding has no applied current flowing in it to determine the 0° and 180° positions and extrapolating the 60°, 120°, 240° and 300° positions by dividing the time interval therebetween by a factor of 3.